

Muge 150th:

The 150th Anniversary of the Discovery of Mesolithic Shellmiddens—Volume 2

Edited by

Nuno Bicho, Cleia Detry, T. Douglas Price
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Cambridge
Scholars
Publishing



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This book first published 2015

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

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ISBN (10): 1-4438-8216-X

ISBN (13): 978-1-4438-8216-3

CHAPTER THREE

BEYOND THE MESOLITHIC SHELL MIDDENS: A CHRONO-CARTOGRAPHIC OVERVIEW OF THE ANCIENT PEASANT COMMUNITIES IN MUGE

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Abstract

Muge is mostly known for the presence of numerous late Mesolithic shell middens. Perhaps for this reason, archaeological research has been oriented towards this particular matter—resulting in less information regarding immediately subsequent periods. Recent field surveys have allowed a recognition that, beyond the Mesolithic shell middens, we can also find an important occupancy of space by ancient peasant communities from the Early Neolithic onwards. However, these occupations are related to the Late Early Neolithic. Occupations related to the very first Neolithic communities are only known to peripheral areas of the Mesolithic exploitation territories. It seems that there is a time gap between the last Mesolithic communities—that have persisted here, even after the beginning of the Neolithisation Process in other areas (Estremadura Limestone Massif)—and the first Neolithic communities to occupy this area. This contribution aims to present a chrono-cartographic overview of this area, defining possible space occupation diagrams since the last centuries of the

6th millennium BC, without a temporal (apparently only spatial) continuity with the Mesolithic shell middens.

A Historiographical View

The region of Muge is well known for the presence of numerous late Mesolithic shell middens, and, as well as the Sado region, is understood to be a preferential area of occupation for the last hunter-gatherer communities in the western Iberian Peninsula. Perhaps for this reason, all research efforts during the last decades have been oriented towards this particular matter—thus, there remains a certain lack of information regarding the immediately subsequent periods.

On the left bank of the Lower Tagus valley (particularly concerning the Muge area), the available data of the Early and Middle Neolithic periods, until the late 20th century, amounted to the reduced notice from “Early Neolithic campsite” ORZ-1, excavated in the early 1980s (Gonçalves 1983-84b), and the few decorated pottery sherds found in the upper stratigraphic levels of Moita do Sebastião (Arnaud 1989). There is also some evidence of Neolithic occupation at Cabeço da Amoreira, Fonte do Padre Pedro 1 and Cova da Onça (Ferreira 1974; Gomes and Batista 1991; Bicho *et al.* 2011).

In contrast to the left bank of the Lower Tagus valley, these cultural phases have higher information content in the Estremadura, Alentejo and Western Algarve. The increased research in these areas over the last two decades of the 20th century has been crucial to the understanding of the human societies that inhabited the current Portuguese area between the 6th and the 4th millennia BC. According to this view and looking to the cartography of the Neolithisation Process, there is a gap of information in relation to the Lower Tagus area.

However, this situation has changed in the last 15 years. Recent fieldwork that almost exclusively corresponds to survey projects and rescue excavations has identified and partially excavated a significant number of archaeological sites related to Neolithic communities. This information has allowed us to recognise that, beyond the Mesolithic shell middens of Muge, we can also find an important spatial occupation by ancient peasant communities from the Early Neolithic onwards—sometimes in areas coinciding with earlier Mesolithic sites (Fig. 3.1).

In the late 20th century, Gonçalo Lopes carried out a survey and discovered, in different areas along the terraces near the Muge and Tagus Rivers, an interesting number of artefacts that, according to their technological features, are related to Neolithic and Chalcolithic settlements.

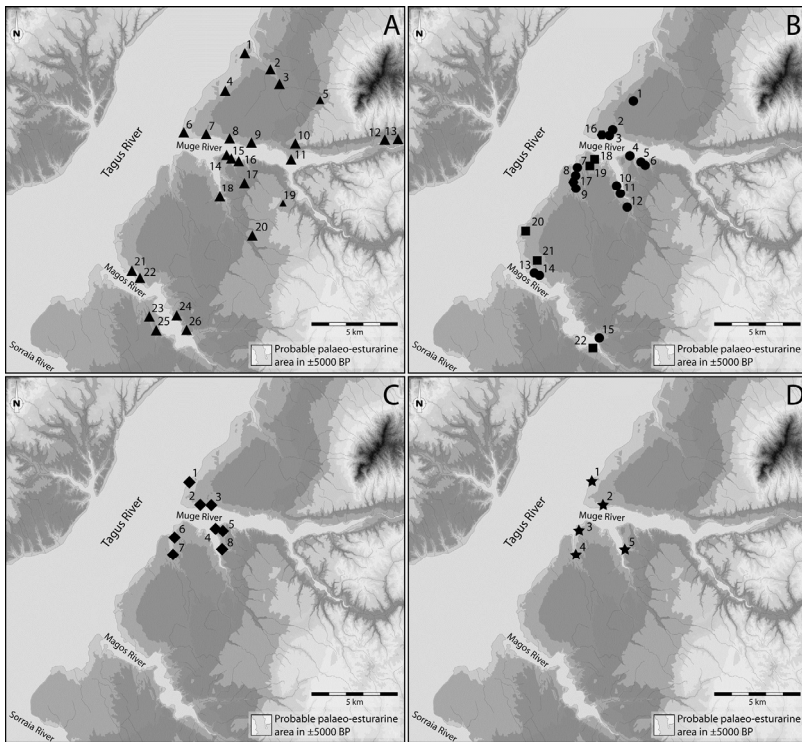


Fig. 3.1. Location of Mesolithic to Late Chalcolithic sites in the Muge region.

A. Mesolithic: Azeitada (1); Fonte da Moça 1 (2); Fonte da Moça 2 (3); Alqueva da Branca (4); Beira Nova 21 (5); Quinta da Fábrica (6); Fonte do Padre Pedro 1 (7); Flor da Beira (8); Cabeço da Arruda (9); Caniçais da Rainha (10); Três Marcos (11); Ferrarias (12); Monte do Ferro (13); Moita do Sebastião (14); Vale Pacheco (15); Cabeço da Amoreira (16); Vale de Martim Afonso (17); Quinta de Gatos 4 (18); Arneiro dos Pescadores (19); Vale da Amieira (20); Cova da Onça (21); Monte dos Ossos (22); Cabeço dos Morros (23); Magos de Cima (24); Magos de Baixo (25); Barragem (26).

B. Neolithic (circle: Early Neolithic; hexagon: Late Early Neolithic/Middle Neolithic; square: Neolithic without further specification): Cortiços (1); Via Longa (2); Fonte do Padre Pedro 2 (3); Moita do Sebastião (4); Cabeço da Amoreira (5); Amoreira 1 (6); Vale de Lobos 1 (7); Vale de Lobos 2 (8); Vale de Lobos 4 (9); Quinta dos Gatos 1 and 2 (10); Casas Velhas do Coelhinho (11); Vale do Coelhinho 1 (12); Cova da Onça (13); ORZ-1 (14); Vala Real (15); Forno do Tijolo 2 (16); Vale de Lobos 3 (17); Horta da Casa Cadaval 1 (18); Arneiro dos Moinhos (19); Escaroupim (20); Pinhal das Teixeira (21); Paúl da Vala Real (22).

C. Late Neolithic/Early Chalcolithic: Alqueve 1 – Porto do Sabugueiro (1); Alqueve 2 – Porto do Sabugueiro (2); Forno do Tijolo 2 (3); Olival de Vasques (4); Sobreiro do Neto (5); Adua 1 (6); Vale de Lobos 1 (7); Vale de Lobos 4 (8); Sobral do Martim Afonso (9).

D. Late Chalcolithic: Forno do Tijolo 2 (1); Quinta do Dias (2); Vale de Lobos 4 (3); Sobral do Martim Afonso (4).

In 2006, a research project was designated to study the first agropastoral groups on the left bank of the Lower Tagus valley (the NAM-Project, directed by César Neves, Filipa Rodrigues and Mariana Diniz). The main goal of this project was to fill the gap in the archaeological record based on: new available data revealed by Gonçalo Lopes' survey and rescue fieldwork in the Muge area (Paúl da Vala Real and Vala Real) and Benavente (Monte da Foz 1 and Moita do Ourives). However, this project only lasted for one year and was focused on the Benavente area (Neves *et al.* 2008a, 2008b; Neves 2010), leaving the region of Muge at a similar level of understanding as it was at the beginning of the project.

Casas Novas (Coruche) and Cortiços (Benfíca do Ribatejo) are two open-air sites, excavated in the last three years, which revealed chronological realities which are practically unknown in this area. Beyond their important archaeological remains, for the first time in the last thirty years, there have been excavations of Neolithic sites with the main purpose of understanding the Neolithisation Process in this region (Gonçalves 2009; Gonçalves and Sousa, *in press*; Carvalho *et al.* 2013).

The late Neolithic and Chalcolithic periods have also been poorly characterised until now, only represented by the burial site of Martim Afonso (Leisner and Leisner 1959) or sites actually located in adjacent areas, such as Cabeço da Bruxa (Kalb and Höck 1981-82), Cabeço do Pé da Erra (Gonçalves 1982; 1983-84a) or Monte da Quinta 2 (Valera *et al.* 2007).

The archaeological evidence shows that the presence of human groups is a reality during the Neolithic and Chalcolithic in the Muge region. However, there is still a lack of clarity on the development of these occupations, their functional purposes and the kind of strategy that was used to explore the local environment and landscape.

Physical Environment

The sites are found on the levels of Pleistocene low terraces (T3) embedded between the escarpments of the Miocene limestones of lacustrine facies on the right bank of the Tagus and the Pleistocene deposits and above the edges of the detritic Miocene on the left bank (the Mora-Lamarosa geomorphological level). This is a generic open landscape, characterised by a hillside area that softly slopes from the Almeirim mountain range to the Tagus River bank, configuring a vast plain corresponding to fluvial terrace deposits.

This is an area generally defined by the palaeo-estuary formed by the flandrian transgression, filling the würmian cutout of the Tagus and direct

tributaries and reaching its maximum in ± 5000 BP. These sites are located in an ecotonic environment between the inland and the Tagus palaeo-estuarine areas. This palaeo-estuary, prior to the sedimentation and formation of Holocene alluvial plains, would provide significant resource availability complemented with seasonal inland exploitation (Daveau 1980; Martins 2004; Freitas *et al.* 2006).

Early Neolithic and Middle Neolithic Occupations

From the available data, we can say that the region of Muge was occupied from the end of the 6th/beginning of the 5th millennium BC, if not earlier. Since absolute dates are not yet available, chrono-cultural attributions could only be obtained according to typological criteria. At the moment, there is no evidence of an earlier Neolithic occupation from the artefacts recovered during the survey and from the few partly excavated archaeological sites.

It seems that small Early Neolithic groups settled in this area, kept substantially identical settlement patterns and explored the same ecotonic environment as the last hunter-gatherer groups of the local Mesolithic background: located near watercourses (Tagus, Magos, Muge Rivers and Coelho Stream) and in open spaces geologically characterised by sandy deposits.

At this time, it is impossible to define the subsistence strategy of the groups who lived in the Muge area in the Early Neolithic. But the settlement location near the palaeo-estuary, in addition to the low density of artefacts connected to agriculture, suggests that the neighbouring resources (namely aquatic) were still very important to those groups. To complicate the characterisation of their subsistence strategies, there is a total absence of ecofacts in the archaeological record. Given the sediment acidity, the recovery of preserved Neolithic organic material became a scientific utopia.

The left bank of the Lower Tagus valley was probably a salty marsh with some river banks and steeped quaternary terraces suitable for human occupation, during the maximum transgression in the Middle Holocene (± 6900 BP, Freitas *et al.* 2006). At this time, the region was under an estuarine regime with salty waters in the Lower Tagus and in the final courses of its tributaries. Although, on the one hand, salty lands are unsuitable for agricultural practices, on the other hand, hunting, gathering and fishing were valuable economic activities, due to the estuarine conditions. However, it is important to notice the relevant artefactual evidence of agricultural practices in the Early Neolithic site of Cortiços.

Sickle implements with evidence of cereal polish are an important scientific reality in order to understand the level of agricultural practices during the Early Neolithic of central Portugal (Carvalho *et al.* 2013). Nevertheless, this important evidence does not mean that the human groups of Cortiços practised agriculture in this area. There is still no empirical information on the direct evidence of agriculture (domestic plant remains).

The archaeological artefacts brought out by the survey work are mainly connected with Early Neolithic occupations. In general, pottery is represented by non-decorated and decorated sherds. Decorated pottery shows different types of impressed, incised and plastic motifs. After the non-decorated, the pottery with incised motifs is the most representative. The most common are motifs obtained by sharp incisions or by wavy and straight incised lines (parallel vertical and horizontal lines). The impressed pottery is characterised by uninterrupted punctures forming irregular channels, some sherds with the motif known as “false acacia leaf” and, of low representation, pots decorated with combined techniques (impression and plastic) like regular punctures in a cordon. The plastic motifs are normally isolated in the sherds with the cordons and small “marmelons” being the most representative motifs (Fig. 3.2A).

A very fragmented assemblage defines the pottery, but, according to a preliminary typological analysis of the sherds, these usually belong to spherical and simple vessels with a circular mouth.

Polished stone tools are represented by two adzes and two axes with circular/elliptic cross-sections (Fonte do Padre Pedro 2 and Vale de Lobos 2), probably made of regionally available raw materials.

Flint and quartzite artefacts dominate the flaked stone inventory. In flint, the most common artefacts are prismatic cores (pressure debitage), small blades and bladelets, retouched bladelets, flakes, side-scrapers and geometric armatures, composed mainly of segments (Fig. 3.2C). The quartzite lithic production system is less diversified and it is characterised by a macroindustry oriented towards flake production. Unlike the quartzite and quartz (local exploitation of raw material), flint must have been collected from a secondary position on the right bank of the Tagus and its use was mainly for laminar production. This has an almost exclusive cenomanian geological origin presenting macroscopic characteristics similar to those recognised in the silicifications of the Rio Maior basin (located approximately 30 km away in a straight line, on the opposite bank of the Tagus).

A superficial analysis of the Early Neolithic map (Fig. 3.1B) suggests a significant number of settlements with the same chrono-cultural contexts. However, the idea of a large demographic with contemporary occupation is unlikely. The settlements seem to fit within a specific typological context which is culturally related to the earlier phases of the Neolithisation Process: short duration campsites.

The density of artefacts and their techno-typological features and homogeneity might lead in that direction. With the range of occupation in short periods of time, there is a possibility that the same Neolithic groups occupied the same sites at different times of the year. The large plains of the quaternary terraces would provide enough space to settle without the geographic constraint of occupying the same physical place as the last group staying in the area. Therefore, Vale do Coelheiro and Casas Velhas do Coelheiro may have been just one large Neolithic occupation (with several groups staying there, within short chronological gaps but during the same cultural period), and the same evidence can be verified in Vale de Lobos (*loci* 1 to 4). Studying this area and its Early Neolithic occupations means dealing with several issues related to the geographical definition of settlement and horizontal stratification.

The Early Neolithic sites of Muge, even Cortiços with cardial potsherds, have direct parallels which are mainly evident in the decorative catalogues of ceramic vessels, on sites dated from the beginning of the 5th millennium BC, in the inland areas of the Alentejo and Estremadura (Diniz 2007; Carvalho 2008).

Thus, taking into account the radiocarbon dates of the later occupations of the Mesolithic shell middens of Muge (Moita do Sebastião, Cabeço da Arruda and Cabeço da Amoreira), centred in the third quarter of the 6th millennium BC, we can suggest a "theoretical temporal hiatus" of two or three centuries between the last Mesolithic communities and the first Neolithic communities to occupy this region (Carvalho 2008).

It seems therefore that we are merely facing a spatial continuity rather than a temporal continuity, possibly explained not by a cultural succession, but by a coincidence of resource exploitation strategies. This fact is mainly evident in the Neolithic occupation of earlier Mesolithic sites—such as Moita do Sebastião, Cabeço da Amoreira (associated with Amoreira 1), Fonte do Padre Pedro 1 (associated with Fonte do Padre Pedro 2 and Via Longa) and Cova da Onça (associated with ORZ-1), without implicating a continuous chronological sequence of occupation; instead we are probably dealing with a reoccupation of the same places where older sites were situated.

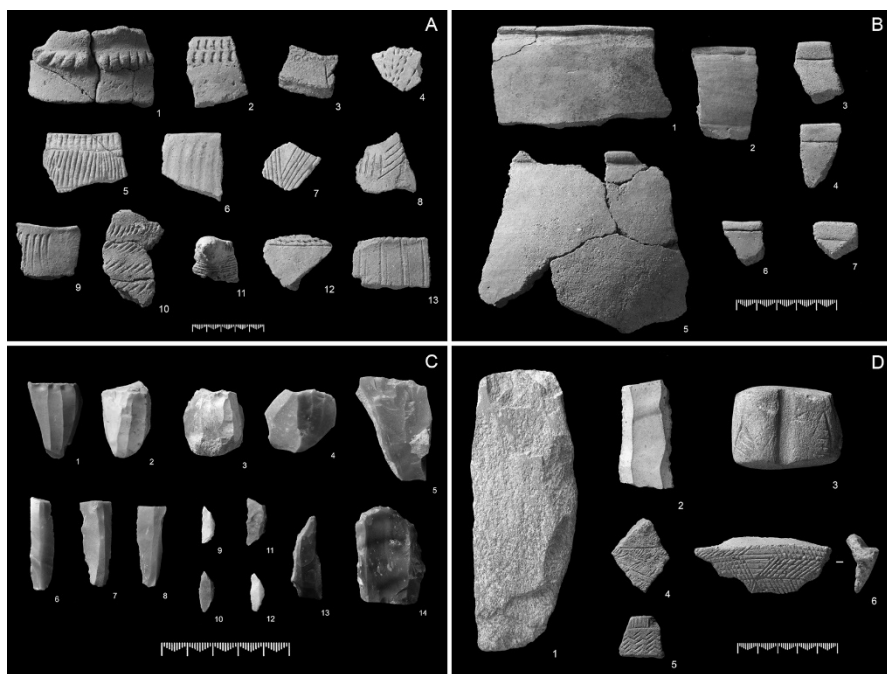


Fig. 3.2. Examples of the Neolithic and Chalcolithic material culture in the Muge region.

A. Pottery sherds with plastic, impressed and incised decoration from Early Neolithic sites: Casas Velhas do Coelheiro (1, 9-11); Vale de Lobos 1 (2-7); Fonte do Padre Pedro 2 (8); Amoreira (12-13).

B. Pottery sherds with an incised groove below the rim from Middle Neolithic sites: Forno do Tijolo 2 (1-4); Casas Velhas do Coelheiro (5); Vale de Lobos 3 (6-7).

C. Lithic artefacts (prismatic bladelet cores, retouched bladelets, geometric armatures, perforator and end-scraper) from Neolithic sites: Vale de Lobos 2 (1); Fonte do Padre Pedro 2 (2, 8-11); Casas Velhas do Coelheiro (3-7, 13-14); Vale de Lobos 3 (12). All artefacts in flint except 12 in quartz.

D. Artefacts from Chalcolithic sites (amphibolite block-ingot, retouched flint blade, mica-schist “polisher” and Beaker sherds): Sobral do Martim Afonso (1-2, 5); Vale de Lobos 1 (3); Forno do Tijolo 2 (4); Vale de Lobos 4 (6).

The data are not as clear for the Middle Neolithic as for the Early Neolithic. There are a few sites that can be placed between the Late Early Neolithic and the Middle Neolithic (second half of the 5th / first half of the 4th millennium BC). Vale de Lobos 3, Forno do Tijolo 2 and Casas Velhas do Coelheiro revealed a material culture with elements usually related to

the early stages of Middle Neolithic. The best examples are pottery sherds decorated with only a horizontal groove below the rim, a large number of non-decorated ones and small flint blades. The pottery forms correspond, typologically, to bowls and plain pots (Fig. 3.2B). However, it is important to notice that these same archaeological sites provide other artefacts that are connected to distinct stages of the Neolithic (and different stages within the Early Neolithic), making it even harder to ascertain the chronological definition.

Late Neolithic/Chalcolithic Occupations

The sites that can clearly be related to this period are located in direct relation to the Tagus and Muge Rivers, implanted near their banks (Figure 3.1C). They are framed by a generic open landscape with no major concerns of a defensive nature, but with a clear visual domain over the surroundings and with direct access to the resources provided by the paleo-estuary.

Although very few sites are actually known in the Muge area, such as Sobral do Martim Afonso, Sobreiro do Neto, Olival de Vasques, Adua 1 and Alqueve 1-2 (Porto do Sabugueiro), the occupation of this region during the late Neolithic and Chalcolithic is not entirely unknown, taking into account the relative proximity of the important sites of Cabeço da Bruxa (Alpiarça), Monte da Quinta 2 (Benavente) and Cabeço do Pé da Erra (Coruche)—also mentioning the fortified settlement of Vila Nova de São Pedro (Azambuja) on the opposite bank of the Tagus River.

In the area of Muge, the site which stands out is Sobral do Martim Afonso, both by the extent of the occupied area (based on the dispersal of archaeological material) and by the quantity and variety of the collected artefacts. With specific regard to the pottery in terms of typology and the generic set of identified sites, the majority of the vessels correspond to sphere-derived forms such as bowls and spheroidal pots. However, other typological kinds of pottery were collected in Sobral do Martim Afonso, such as carinated bowls and plates, as well as a ribbed pottery sherd with burnished surfaces.

Furthermore, a curious set of artefacts was recovered from this site in the late 19th century. Their particular features may point to the existence of a funerary site in Martim Afonso. In fact, the ensemble includes some human bones, pottery vessels, flint blades, a halberd and an engraved schist “crosier” (Leisner and Leisner 1959).

This case is fairly interesting as it could indicate the presence of a burial place within the settlement (or in its closest surroundings). Another

similar context may be found in Alqueve 1 (Porto do Sabugeiro), where some fragments of engraved schist plaques were collected amongst all the typical material remains of a habitat area. However, this fact is hardly definable given the disturbances resulting from the Iron Age and Roman occupations of this site.

In the set of identified sites, mention should also be made of the collection of “horned idols” (Adua 1 and Olival de Vasques), as well as the axes with rectangular cross-sections (highlighting the presence of an amphibolite block-ingot in Sobral do Martim Afonso) and large retouched flint blades—typical artefacts of the Late Neolithic and Chalcolithic material culture (Fig. 3.2D).

In Vale de Lobos 1 we must refer to the discovery of a mica-schist “polisher”, decorated with filled triangles similar to those found in the engravings of schist plaques. Although no other element confirms its chronology, similar artefacts are often found in Late Neolithic/Chalcolithic contexts (La Pijotilla, for instance).

Regarding the Late Neolithic and Chalcolithic, the main parallels are also remitted to the Alentejo. Given the contextual blanks evidenced in the area of Muge (due to the effective lack of excavated sites), we should resort mainly to the data collected from the sites of the Sorraia valley, framed in the same geographical environment and evidently related to the sites of Muge.

In fact, the low-carinated bowls of Monte da Quinta 2 (Valera *et al.* 2007) or the thickened-rim plates (“almond-shaped”) of Cabeço do Pé da Erra (Gonçalves 1982; 1983-84a) relate to elements that are in some way strange to the material culture universe of the Late Neolithic and Chalcolithic of Estremadura.

However, the current relationships with the Chalcolithic communities of the Lisbon Peninsula are obviously tenable, particularly if we consider the proximity of the important fortified settlement of Vila Nova de São Pedro, about 15 km from the area of Muge, on the opposite bank of the Tagus (and easily accessible via the Rio Maior-Almoster Rivers). Or, a bit further away, the settlements of Pedra do Ouro and Ota...

Such relationships are equally suggested by the two sites mentioned above, whether by the thick rectangular loom-weights collected in Monte da Quinta 2 or the pottery with “acacia-leaf” printed decoration collected in Cabeço do Pé da Erra—revealing the role of the Sorraia and Muge Rivers as areas of circulation connecting Alentejo to the Lisbon Peninsula.

These axes of mobility would be materialised precisely in the settlements of Cabeço do Pé da Erra, Sobral do Martim Afonso and Cabeço da Bruxa (Gonçalves 1982; 1983-84a; Kalb and Höck 1981-82),

as well as in the "culturally megalithic" burial sites of Monte da Barca and Martim Afonso (Leisner and Leisner 1959; Gonçalves 2011).

The Late Chalcolithic occupation of the Muge area, although scarce and without great archaeological representativity, is evident by the collection of some beaker pottery sherds in Sobral do Martim Afonso, Vale de Lobos 4 and Forno do Tijolo 2 (Fig. 3.2D). Their exclusively incised decorative motifs point to a late phase of the Beaker cultural episode, and should be read in consonance with the apparently contemporary sites of the Alpiarça and Coruche areas (Harrison 1977; Kalb and Höck 1981-82; Gonçalves 2009). A schist wrist-guard was collected in Quinta do Dias—an artefact chrono-culturally related to the Bell Beaker phenomenon and usually found in funerary contexts of the Late Chalcolithic.

Conclusions

In short, the traditional view of the Muge area as a territory occupied exclusively by the last hunter-gatherers and used by the first peasant communities merely as a crossing space (without a stable residential occupancy) is only apparent. As one can observe, this area knows a continuum of effective occupations that extends to the Chalcolithic. However, the first Neolithic occupations are related to what is chrono-culturally designated as Late Early Neolithic. Occupations related to the beginning of the Early Neolithic communities, the bearers of pottery with cardial decoration, are only known to peripheral areas of the Mesolithic exploitation territories. So, it seems that there is a time gap of several centuries between the last Mesolithic communities, which persisted here even after the introduction of new ways of subsistence based on food production in other areas (namely, the Estremadura Limestone Massif), and the first Neolithic communities to occupy this area—yet still maintaining substantially identical settlement patterns and exploring the same ecotonic environment. This fact is evident in the overlapping of occupations of distinct chronologies on the same site, which does not necessarily indicate a cultural continuity but a coincidence of territorial exploitation strategies.

With the affirmation of regular exchange networks between Alentejo and the Lisbon Peninsula during the Late Neolithic and Chalcolithic, this area constituted a connection space of culturally distinct territories, with the occupations hereby recognised acting as direct and effective evidence for the definition of organised settlement diagrams.

Nevertheless, we have to acknowledge that these archaeological data are associated with some interpretative limitations: the settlements are partially excavated or recognised only by surface remains; the archaeological record reveals sites with a broad diachrony of occupations; taphonomic problems related to the sandy deposits do not allow ecofact preservation in the archaeological record; and the chronological definitions have been made using only typological criteria. The possible readings presented herein should therefore be put into perspective by the available sample bias.

Thus, this overview is not intended to present explanatory models for the Neolithisation Process in this area (how, when, and why the first agropastoralist communities arrived, how they settled and how they used the landscape) and for the development of these human occupations to the Chalcolithic. For now, however, what this data can reveal is that archaeological maps with no Neolithic-Chalcolithic dots in the Muge region are an archaeological issue, rather than a historical one.

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